Be sure to read under Correspondence, the letter from Dr. Harry M. Sherman, of the State Council of Defense. Then read over again the editorials in this issue on the military situation. Then decide, if you are not in uniform, what hinders your going in. If there is doubt in your mind as to whether *you* should go, or if you feel that you should not, do not run the risk of a wrong decision. Lay the facts before a competent tribunal. Write them to the State Council of Defense or to the officers of your State Society. In either case you will receive an impartial verdict based on the facts of your personal situation, and you will be fortified in your resolution and strengthened in your conviction that you are doing the right and patriotic thing, whether you go or whether you stay. But in any case, *decide now*.

The Smoke and Dust Abatement League of Pittsburg states that during 1917 about 500,000,000 tons of soft coal were burned in the United States, of which about 20 per cent., or 100,000,000 tons, were lost through incomplete combustion. This incomplete combustion is indicated by black smoke and soot. To allow black smoke and soot to appear is a direct evidence of coal waste and should be stopped. It is wasting a chief sinew of war and is unpatriotic. It is a nuisance unmitigated, it increases fogs, cuts off the sunshine, pollutes the atmosphere, hinders vegetation, destroys building materials, and is too costly and wasteful to be tolerated. If the black smokers will not of themselves stop this wasteful nuisance, they must be compelled to do so.

Many papers read at the annual meeting of the California State Medical Society at Del Monte have not yet been sent to the Journal. These papers become the property of the Journal and publication elsewhere without permission from the Journal is not permissible. Authors are requested to see that their papers are sent in at once. It is hoped that no undue delay will appear in their publication. Those papers already received again illustrate the difficulties which attend the medical writer who forgets the requirements of the editorial office. Seldom is a paper received without misspelled words, incorrect grammar, or poor typing. Wide margins and double spacing are too often forgotten. Carbon copies are returned, as only originals are wanted for the compositors. The simpler rules of punctuation are often abused. Words are capitalized without reference to their grammatical use. "E. g." is used when "i. e." is intended. And above all, the cardinal sin of too many writers is verbosity. Most papers could be condensed to their advantage.

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31. Try to ease the mind of the patient, encourage him to look forward to being cured, even if thou art not thyself convinced of it, for this will greatly strengthen his nature.

38. When the patient does not follow thine injunctions or his servants and people do not promptly obey thine instructions or show thee the proper respect, it were better to give up the treatment.—Isaac Judaeus.

Special Article

TRAINING OF NURSES AND SOCIAL WORKERS IN THE PRESENT EMERGENCY.*

By PHILIP KING BROWN, M. D., San Francisco.

Attention was called in the March 18th number of the Red Cross Bulletin to the fact that the United States has only 7000 enrolled nurses and needs at once 35,000 more. There are said to be over 80,000 nurses in the United States who have the title R. N. which is essential to Red Cross service. This number includes thousands eligible to the title who were married and out of the profession when this standardization was put into effect several years ago and who applied for registration and the R. N. title on the ground of sentiment. Many more of the 80,000 have married since or have gone into the rapidly enlarging field for trained nurses in public health, social service, permanent hospital positions, laboratory work and in doctors' office work, so that it is probable that there are not available for Red Cross service as nurses more than 40,000 or 50,000 today. The situation is as serious as was our entering the war with an army of scarce a handful, and some plan for increasing the supply of nurses should be instituted at once if our soldiers are not to suffer as have the soldiers of France and England because of the scarcity of trained nurses.

The Government has set the example of intensive training to increase its organized man power particularly in the training of officers, and the same method must be instituted at once if we would meet adequately the need of a larger trained woman power. Tradition and needs, long outgrown, have fixed the methods of training nurses in hospitals, largely to meet the needs of hospitals and to provide private nurses for the sick, and not to meet the broadened fields of the nursing profession, so that today most of the best nurses are obliged to supplement their training outside of hospitals before they settle down to the particular branch of the nursing work that they choose to follow. If hospitals do not teach the endless ramifications of public health and social service work, specialties that have been developed through the medical profession and with which nurses should naturally be associated, is it quite fair to make a young woman go through the long three years of a nurse's training only to have need of an additional year or more of training before she attains the goal of her desire? A nurse's training in point of fact is not essential to many of these specialties although a valuable foundation upon which to build. Three years of hospital training, however, has a tendency to destroy initiative which is peculiarly necessary in public health or social service work. Practically no social workers are recruited from the ranks of nurses and many of the best public health workers are not nurses. The training of nurses today contains too much that ought to be required of young women before they enter training schools, since the physiology, anatomy, bacteriology, and chemistry taught in

* An address delivered May 15, 1918, at the Graduation Exercises of the Lane Hospital Training School.

most hospital training schools is exceedingly poorly done. It is text-book work, where laboratory work and practical demonstration are absolutely necessary to proper understanding. Then, too, the pupil nurses are not always adequately supervised, and the passing-on-of-information method is too much in vogue. Too much menial labor is required of nurses, work better done by orderlies or maids. No established system exists by which a nurse may take her three years' training in several schools where she could get to advantage the particular kind of work she might wish to follow. In no other educational system in the country is this true. In preparatory schools, colleges, technical and professional schools of high standing students may be accredited with work done elsewhere often without need of examination. Men in the army have been promoted from the ranks to positions as officers, and definite provision is made for the taking of examinations which qualify them for officers' rank. This lack of reciprocity among hospital training schools is one of the most unfair conditions in the present system of training nurses. It is due to the too frequent lack of a definite standardization of the teaching, and the fact that teaching is a profession and most hospitals have failed to look upon it as anything but an experience. Undoubtedly the hospitals have been seriously handicapped by having to make inducements to women to enter the schools and by too wide a swing of the pendulum in the eight-hour law, which interferes with intensive consecutive work and in consequence the personal interest of the nurses in individual cases. The conflict of interests which has arisen is one which must be straightened out, both in the interests of the hospitals and of the nurses, to say nothing of the interests of the sick and wounded in the present emergency. Why should pupil nurses be boarded, uniformed, and even paid small salaries by hospitals when they are being helped to enter one of the most popular and remunerative fields open to women—far more free and better paid than public school teaching. There is no more reason for it than that the public should pay the board of the normal school pupils. The cost of nurses' homes and their training should be borne by the pupil nurses and not by the sick.

If the point is made clear that hospitals under the present regime do not as a rule do the work of training the modern nurse satisfactorily, both because of poor teaching of the sciences for which they are not organized, and the omission of opportunity for special training, and that all hospitals require too long a training period, it follows that now is the time to recognize the situation. If there is no real need of the three-year training why not make the present emergency the basis for reorganization.

For some years past various efforts have been made by the leading hospitals in the country to improve all the conditions, educational and otherwise, attending the training of nurses and to draw into the profession more college women. The latest of these movements is the three months' intensive training course preliminary to two years' hospital work offered to college graduates of not over ten years' standing, by Vassar College this summer and subsidized by the American Red Cross. Herbert Mills, Dean of the Training Camp for Nurses, in an article on College Women and Nursing, in the Survey of April 27th says, "The work of the nurse has been largely private family nursing which has not seemed to the college woman to offer full opportunity for her liberal training, her developed personality, her social vision and obligation. The three years' training course of the better hospitals with much repetition of college courses has been a hindrance to the entrance of college women into nursing." It would be safe to add three other factors which have operated to keep college women out of nursing—the constant and unnecessary repetition of menial work, especially in the poorer schools, the entirely unnecessary length of service, and finally the dormitory and boarding school system of living and its limitation of independence, which is bad psychology, for nurses are a class of young women needing outside contacts, as people whose labor confines them closely always do, and the boarding school regime is intolerable to young women who have enjoyed academic freedom for four years. The Vassar experiment is known as the Plattsburg for Nurses and in three months the sciences and some administrative work will be taught. The graduates of the camp will save nine months of the present three-year requirement for nurses' training. This is certainly a big step in the right direction because it puts the teaching of sciences in the place where it belongs, in the hands of trained teachers with proper laboratories and makes it a requirement for admission to hospital training. However it is no solution to the immediate problem of shortage of nurses for community and war work, nor is it commensurate as a solution to the broad problem with the Stanford plan which has now been in operation a year, and has already been adopted by the University of California. The Stanford plan permits a college student at any time in her first three years or directly after it to take a probationary period of three months and follow it up at a suitable time if she desires by the balance of two years of hospital training. She is given her A. B. degree on completion of her nurse's course and under our state law is a candidate for examination for her R. N. This accomplishes in five years what the Vassar plan does in six and a quarter years and it does it equally well and far more conveniently for the student. She gets her mental food in a better balanced ration. This plan represents the highest practical advance in this country in the training of nurses and it is with no small amount of pride that you may recognize your connection with the instituton which has taken this leading place in putting your profession on a constantly higher educational basis.

It remains to consider a plan of reorganization of nurses' training that will both help the present emergency, remove the objections economic, social and educational to the present system of training and so broaden the nursing field that it may co-

ordinate better with the needs of the community.

A three months' course in anatomy, physiology, bacteriology, and chemistry in a Class A medical school or teaching institution properly equipped with laboratories and trained teachers and acceptable to an association of hospital training schools, should be a requisite for admission to all first-class training schools. This should be followed by six months of *well supervised* ward work in medical and surgical wards of a good hospital, and a three months' period of operating-room discipline. During all this time pupil nurses should board themselves and pay fees for their instruction as in any normal, vocational or technical school or in college. Pupil nurses should be ready then for a three months' final training in army or cantonment hospitals before going to the front. Army hospital work is a specialty by itself and to make good army nurses a supplementary course of training in a base or cantonment hospital is really necessary even for experienced graduate nurses. To meet the present emergency before any reorganization of nursing courses could be effective all pupil nurses in the United States of two years' standing should be available immediately for the final army hospital training and indeed the preliminary period under the present training scheme might be cut to eighteen months if necessary. Under the intensive training plan, should nurses not choose to elect army service as their specialty after the nine months' hospital work, further three months' courses in other special lines ought to be open to them. While only one such course might be required, it should be possible for a nurse to continue on and take any number of elective periods, paying a suitable fee for the training and she should be able to re-enter any school at any time for supplementary courses so that she might broaden her field of work. Among such special courses which might be given to advantage by hospitals are children's diseases, obstetrics, nursing of tuberculous, nervous, or mental diseases, laboratory and X-ray technique, and finally social service and public health as far as hospitals can teach them satisfactorily.

One cannot read a single number of the *Quarterly Journal of Public Health Nursing* without realizing that not even our public school system is of any more importance to the future welfare of the country than is the organized work of Public Health Nurses. From the cradle to the grave our people take no important step in which they do not feel the influence at once of this group. The infinite angles of infancy and child welfare—yes, even the prenatal care and direction afforded the mother are made possible by this body of women. The food given the child, the way it is handled, the housing conditions, exposures to epidemic diseases are all so followed up in these days that children are safeguarded from hundreds of dangers they or even their parents little dream of. From the moment the immigrant and his family land on our shores, they, too, come under the watchful eye of these guardians of health and through the factories and homes where they work and live is an ever-present influence for better social conditions. The nurse in our large public hospitals sees the end results of what is too often carelessness, exposure, mental and moral decay, and yet she is so situated that she is out of touch with the social problem involved in the case she cares for. If she has the social sense she must stifle it, for it has no place in her work in the hospital. If a man is brought in with typhoid there is no one to explain to his wife the probable length of his illness or to help her conserve her resources until the man can go to work again. Given this lack of social guidance and she and her family can easily become dependents. In one of our hospitals I saw an acutely insane woman with a depression in which she refused to eat and by her side sat her husband with the two little children of the family. He was the real sufferer—unable to go to his work because he could not leave the little ones, and utterly at sea about what to do. The hospital fed the woman scientifically and skillfully through a stomach tube and tended to her bodily wants, but it had no solution for the tragedy of the family. Any social worker or public health nurse could have told the man that the woman must go to a state hospital for the insane and that there were many institutions where his children could be cared for better than he could care for them, leaving him free to earn the living for the family. I think it is safe to say there is no public hospital today that has any claim to first standing that does not provide some social service guidance for its patients and opportunity for study along these lines for its nurses. In the *Survey* of May 4 Miss Edith King, manager of the National Social Workers' Exchange, says, "There is a marked labor shortage in social work. There are not enough people planning for the training. On the basis of last year's enrollment in the five or six leading training schools for social works 500 is a generous estimate of the students in training. The fact that available positions will probably be double and perhaps treble that number indicates the problem set by the shortage." She goes on to speak of the short training courses and to make a strong and well-founded plea for the importance of definite training, referring specially to the two-years' course and adds, "There is little use in believing that older women who have never held a paid position in their lives can suddenly blossom out in a profession for which they feel that 'experience in life' has fitted them." It seems to me important to emphasize what Miss King has already laid great stress upon—the need for thorough training in this field of social service work as well as in that of public health nursing. So many nurses wonder that public health positions go very frequently to lay people. The reason is not far to see when one follows the work of a trained public health worker and sees how little of it duplicates anything a nurse ever learns in the average hospital. Prof. Mills, in the article already referred to, in speaking of the less full opportunity for the nurse for liberal training than the college woman has, and the consequent limited social vision, says, "The great health movement of the last decade or two has rapidly changed this situation. In every direction have opened up lines of executive and social work which only the trained nurse

can do." This is just the point of the whole problem about which I differ emphatically with Prof. Mills, for with her present limited training and destroyed initiative the nurse has not the training she should have in executive work and in the vast majority of hospitals no social work whatever.

We cannot soberly contemplate the huge health problems of the war and of the later readjustment in the light of what we can see now, and not tremble at the risk we run in not preparing more than we are doing to meet them.

Original Articles

THE INTERRELATIONSHIP OF ASTHMA AND TUBERCULOSIS.*

By PHILIP H. PIERSON, M. D., San Francisco.

Asthma as a disease entity does not exist. Among other things it may be an anaphylactic manifestation. This aspect of the subject has been very fully and ably investigated by Talbot and Goodale of Boston and Selflidge, the latter having made a particular study of the polius and flora of California and the Pacific States. It may be due to chronic infection in some other portion of the body; it may be the result of a chronic congestion and inflammation as exists in cases of prolonged cardiac insufficiency. The particular type of asthma that is associated with pulmonary tuberculosis also bears out the idea that asthma, asthmatic breathing, is a symptom and not a disease in itself. Consequently, let me here explain what I mean by asthma.

To me it means a condition symptomatically consisting in more or less prolonged expiration and sometimes inspiration, rather constant for days, weeks or months, associated with exacerbations of more intense discomfort and often increased by exertion. To the patient himself, it may be represented only by a rattling in his "upper air passages" and a slight dyspnea, especially with expirations. The physical signs consist in prolonged expiration, general or localized, accompanied by musical or sonorous rales. With cough or increased depth of respiration, these signs are often increased.

Many older writers on the subject were quite unanimous that these two diseases were antagonistic and seldom existed together. Brügelmann,[1] Sarda and Vires,[2] Grasset,[3] Rancoule[4] and Baur[5] held that asthma was antagonistic to tuberculosis and never secondary to it, but always primary. Landouzy[6] suggested that asthma might be an anaphylactic reaction to the tubercle bacillus. Roboule[7] referred to a pretubercular asthma, meaning that there are individuals with a nearly inactive tuberculosis manifesting itself by producing asthma. Osler[8] observed that one of the early signs of tuberculosis might be asthma with its wheezing and sibilant rales. Socca,[9] from the study of 840 cases of asthma, concluded that nearly all were due to tuberculosis. Reynier,[10] on the contrary, in an article of considerable length, concludes that asthma is in no manner dependent on tuberculosis. Hoffman[11] believes that if they do exist in the same individual each gives up its more pronounced symptoms and the asthmatic attacks become less marked than in other individuals and the tuberculosis becomes a fibroid phthisis. Giffin[12] in reviewing 83 cases of asthma in the St. Mary's Hospital records found only three cases of definite tuberculosis but expressed a suspicion of there being a possible latent tuberculosis as a basis in others.

That enlarged bronchial lymph glands, which may be accepted as an evidence of tuberculosis, were found in asthmatics was first reported in a series of eighteen cases by Chelmonski[13] in 1912. Lawrason Brown[14] is of the opinion that cases of chronic tuberculosis not infrequently developed asthma. Last year Orville Brown[15] published a book on asthma and in it he puts forth a theory—"The non-passive expiratory theory"—to explain the morbid condition which exists at the time of asthmatic attacks, whether mild or severe. His theory is that with ordinary respiration there is an influx of blood and lymph toward the periphery of the lung during inspiration and a retardation of the flow during expiration due to the increased intra alveolar pressure; also that by the act of frequent coughing, sneezing, etc., a still greater increase of intra alveolar tension is created as compared with the pressure in the bronchi and there is a greater impediment placed in the way of blood in the bronchial veins and of the lymph. This causes an obstruction of varying degree in the larger bronchiols with expiration and it gives the sibilant and musical nature to the breathing and rales. There is much more to the theory but this is all that need be considered here.

This requires at least two predisposing factors—paroxyms of coughing and congestion or inflammation in the moderate sized bronchioles. Let me emphasize the fact that asthma is not always a diffuse process but often limited to a small area in one lung. Although the signs may be localized the symptoms may be localized or general. In tuberculosis, we have both of these factors. In order that we may understand why asthma occurs in one or another part of the lungs, may I briefly

* Read before the Forty-seventh Annual Meeting of the Medical Society of the State of California, Del Monte, April, 1918.

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2. Sarda, G. and Vires, J.—Revue de la Tuberculose, 1894, ii, p. 121.
3. Grasset—Lecons Cliniques, 1896, from Reynier (No. 21).
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12. Giffin, H. Z.—Am. Jour. Med. Sc., 1911, cxlii, p. 869.
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